

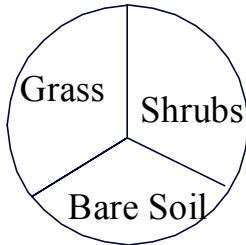


THE COVEY HEADQUARTERS

Volume 2 Issue 3 October 2003

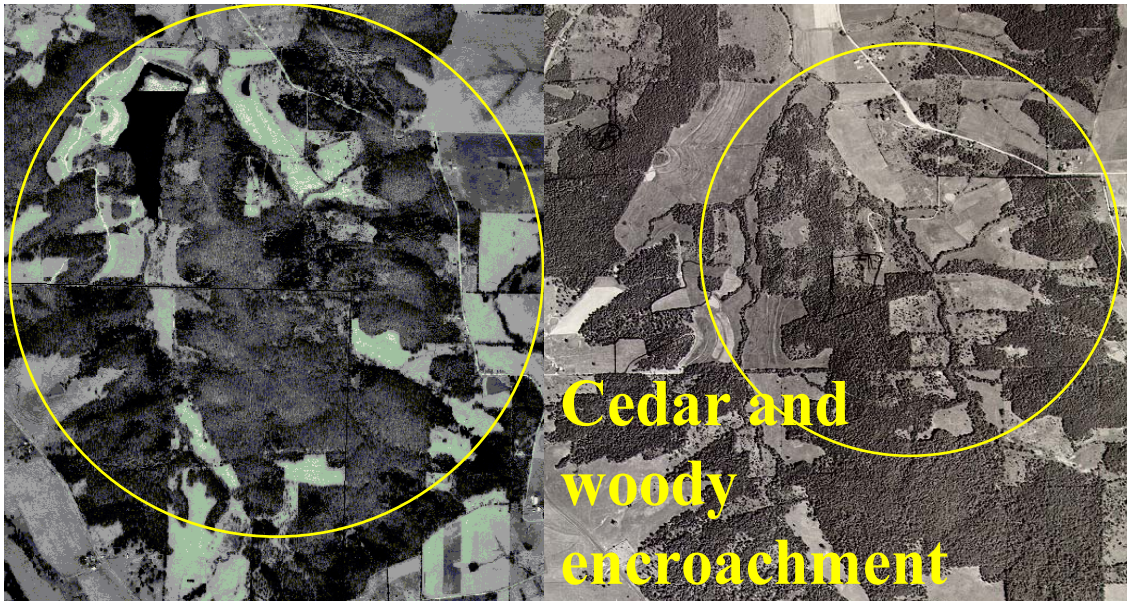
This newsletter is targeted at cooperators and sportspeople in Missouri to provide information on restoring quail. This is a joint effort of the Missouri Department of Conservation, USDA-Natural Resources Conservation Service, University Outreach and Extension and Quail

Unlimited. If you would like to be removed from this mailing list or have suggestions for future articles please contact bill.white@mo.usda.gov or 816-232-6555 x136 or write to the address shown.



The name of this newsletter is taken from an old concept.....that a quail covey operates from a headquarters (shrubby cover). If the rest of the covey's habitat needs are nearby, a covey should be present. We are encouraging landowners to manage their quail habitat according to this concept. Use shrubs as the cornerstone for your quail management efforts. Manage for a diverse grass, broadleaf weed and legume mixture and provide bare ground with row crops, food plots or light disking right next to the shrubby area.

Evidence of More Changes.....from Cole County



1995

1968

1968

A mix of glades and post oak savanna in the center, grain fields on the west and north side, and small pastures, most likely lespedeza, on the east side.

1995

The glades and post oak savannas have been encroached with eastern red cedar (darker areas), most grain fields have been converted to fescue pastures or have been abandoned and are now cedar thickets.

Fall Calendar

- *Begin light disking after October 1
 - *Conduct covey call counts the last 3 weeks of October, 45 minutes before sunrise
 - *Spray brome and fescue in fencelines and under shrubs after leaf drop
 - *Then winterize your sprayer
 - *Beginning mid-November, tree/shrub order forms available, order shrubs for spring planting
 - *Strip spraying of cool-season grasses may continue on warm days in November
 - *Prepare firelines for fall and winter burns, disked firebreaks preferred
 - *Conduct fall and winter burns on native grasses to encourage open ground
 - *Prepare ground for new food plots by plowing or spraying grass sod
 - *Prepare for winter tree cutting operations:
 - get chainsaw maintenance and chain sharpening done
 - buy chemicals for stump treatment
 - *Dormant season seeding of native grasses and forbs begins November 15 in North MO and December 1 in South MO
- Spray brome and fescue that will be converted to native grass/wildflowers

Designing a Covey Headquarters Shrub Planting

The cornerstone of quail management is the covey headquarters. The most important consideration when deciding where to plant a covey headquarters is to make sure it gets placed next to bare ground in the form of row crops, food plots or lightly disked grassland. It should also be next to some well managed wildlife-friendly grassland. Without these two cover types nearby, the headquarters has less of a chance of being used by quail.

Another consideration is the kind of shrubs you plant. What do quail use in the real world?.....most generally it is American plum, shrub dogwoods or blackberry. Another article in this issue discusses indigo bush. You may have observed quail using other shrubs where you hunt. Quail like these shrubs because of their upright growth habit and spacing of the stems within the shrub thicket. These characteristics allow quail to flush up through the shrub canopy, but provide protection from hawks and falcons and the elements.

Covey headquarters should be about 1500 sq feet and should not be less than 20 feet wide. It could be in the shape of a triangle to fit in the corner of a field or any other shape



which fits your situation as long it is at least 20 feet wide. Some landowners have taken the shorter point rows along the edges of crop fields and converted those to shrubs. Others have straightened a fence along a creek or pond and planted shrubs in the odd areas left. Plant shrubs on a 5'X 5' spacing and blackberries on a 2'X 2' spacing. On a 5'X5' spacing it will take 60 shrubs to fill 1500 square feet. Keep the shrubs free of grasses to have the best chance of quail use.

Did You Know???? In 1940, researchers analyzed 5472 crops from Missouri quail taken during the hunting season. It was found that fall/winter food preferences were different between quail taken from the Ozark, prairie and bootheel regions of Missouri. Korean lespedeza was most common in the Ozarks, corn most common in the prairie and bootheel regions, ragweed most common from the prairie and Ozark regions and acorns from the bootheel.

Seed and parts of 302 types of plants made up 97.6 percent of the total. Statewide the most common foods were Korean lespedeza, corn, common ragweed, sorghum and oaks. Seeds from annual plants were highest in volume.....DOES MANAGEMENT OF YOUR FARM ENCOURAGE ANNUAL PLANTS TO FEED QUAIL??????

Important quail plants you need to know.

By Aaron Jeffries, MDC Area Biologist, Jefferson City

Indigo Bush *Amorpha fruticosa*

Indigo bush or false indigo is starting to prove itself to biologists as a drought resistant, fast growing shrub for wildlife plantings. Indigo bush has been available from native plant nurseries for several years. However, just recently was it made available at the Missouri Department of Conservation, George O. White State Tree Nursery in Licking. Indigo bush was established at the state tree nursery as a native alternative to the non-native shrub lespedeza *Lespedeza thunbergii*. Like shrub lespedeza, indigo bush is a woody legume that provides excellent cover and food for wildlife.

Indigo bush is common throughout Missouri in bottomland and upland sites. Indigo bush is a small, multi-stem woody shrub that reaches a height of 6 to 10 feet, with an equal spread at maturity. Indigo bush grows best in full sun to light shade in average to moist soils. Indigo bush has purple flowers in June and July. The plant produces numerous seeds that remain on the plant throughout the year. The seeds are relished by quail and other wildlife and the flowers are an excellent nectar source for insects.

Recent field tests with Indigo bush have proven it to be a fast growing and drought tolerant shrub. In a two year old mixed shrub planting in Saline County, indigo bush plants were over 4 feet tall and had not been browsed by deer and rabbits. The other shrubs, gray and roughleaf dogwood and wild plum, were heavily damaged by deer and rabbit and most were less than 2 foot tall as a result of the heavy browsing.

In another field trial, a landowner in Osage County planted 100 MDC indigo bushes seedlings on July 4, 2003. Despite the drought and only being watered twice during the summer most of the seedlings had grown over 2 feet and some actually flowered. The

landowner hopes to plant a couple hundred more next spring during the recommended planting dates.

Initial plantings at the USDA Plant Materials Center in Elsberry, Missouri have shown indigo bush is easy to establish, drought tolerant, and a fast grower. By the end of the second growing season the shrubs had canopied over the planting site. This makes indigo bush ideal for quick woody cover in large CRP fields or grasslands being managed for quail.

Indigo bush will make a great addition to your existing shrub islands or rows or any new plantings. Indigo bush bare root seedlings should be planted in late winter or early spring. Container grown plants can be planted anytime during the dormant season (late fall is best). Plant bare root seedlings on a 5x5 foot spacing and container plants on a 7x7 foot spacing. You can expect 2 to 3 feet of new growth per year, less on poor sites. Plants should start to bloom in one or two years.



Did You Know???? Quail are probably the most studied bird in the U.S. Quail nesting studies dating back as far as 1933 have documented nest losses to predators and other causes at 60-70%. In a 1990's Missouri study, 56% of quail nests were destroyed during the nesting season. If the current misconception about an increase in predators being responsible for the current quail population crisis were true, then we would see a huge spike in the 1990's data.

Artificial Feeding by Tom Dailey, Quail Research Biologist, MDC

Artificial feeding during rough winters has always been controversial. Scattering some grain here and there may put some food into the bellies of a few birds or it might not because a half inch of fresh snow or even a few good gusts of wind can cover it over in minutes. Even when artificial feeding works perfectly, it benefits a minuscule fraction of the total quail population. At worst, it creates a false sense of accomplishment and merely clouds the real problem, dwindling habitat.

Quail do have a critical need for nutritious food in the winter. During the winter, protein is less important to quail than are high-energy foods such as ragweed, corn and soybeans. The relative value of seeds to quail during winter can be calculated from the seeds' energy value and size. Furthermore, Missouri research on energy needs of quail can be combined with these seed characteristics to calculate the number of seeds of different plant species required to meet the energy requirements of a single quail over a 24-hour period. For example, at 32 degrees Fahrenheit, we know a quail requires 49 kernels of corn, 122 soybeans, 7,248 sumac seeds or 11,218 Korean lespedeza seeds.

The energy value of seeds, however, is just a small part of what determines quail survival during a cold winter day. For example, soybean fields typically have zero cover value in winter; so although they provide a quick, high-energy meal, birds are vulnerable to predation, or to using a lot of energy in the cold and windy conditions in a zero-cover

soybean field. The best winter habitat contains high-energy plant species that provide protective cover (e.g., corn, milo, ragweed, German millet). The easiest approach for supplying good winter feeding cover is periodic disking or burning of portions of fields during fall. This will provide an abundance of ragweed, foxtail, partridge pea, etc. Missouri researchers found that quail living in weedy fields have more fat than quail that inhabit corn and soybean fields. A little bit more fat, or stored energy, is a good thing for quail. If faced with severe winter weather, quail in the weedy fields have the capacity to live a few days without food, whereas less fit birds will more quickly die of hypothermia or be forced to venture out into the inhospitable cold environment. During these times, quail are highly vulnerable to predators.

Does high-quality winter habitat guarantee that quail will not die due to starvation, hypothermia, etc.? No. Quail are especially vulnerable when ice or snow covers food on the ground. Plants such as milo and forage sorghum are considered good emergency winter foods because the seeds stay on the plant (and above the snow) through mid-winter. If you do not have good seed availability quail could suffer during extended periods of cold weather. Feeding could be attempted, but do not expect much of a benefit for quail. Better to let Mother Nature take its course, and prepare to set the stage for good reproduction by focusing on nesting and brood-rearing habitat.

Workshop Opportunities

Prescribed Burn Workshop November 4 6:30 PM, St. Genevieve UMC Extension Building
Prescribed Burn Workshop. Register @ 573-883-2703, For info call Larry Heggemann @ 573-243-1467 ext 123

Small Game Management Workshop

January 20, 2004

7:00 p.m. - 9:00 p.m.

University of Missouri Extension Office-Hillsboro

Learn about land management practices that benefit small game species, especially quail and rabbits. Call (636) 789-2441 ext. 3 to register. Registration deadline is January 16, 2004.

Prescribed Burning Workshop

February 3, 2004

6:00 p.m. - 9:00 p.m.

University of Missouri Extension Office-Hillsboro

Participants will learn how to plan and safely conduct prescribed burns for grassland management. Pre-registration is required.

Call (636) 789-2441 ext. 3 to register

Landowner Success Stories

By Nick Prough, MDC Private Land Conservationist, Harrisonville

This project was a Cass County renovated waterway which was previously in fescue and had no quail using the crop field or waterway before the project. The landowner wanted to dormant seed native grass in the fall and used a cover crop of wheat when he seeded it. This not only allowed for a good soil stabilization of the waterway but also allowed for a wheat plot which the quail used in the spring for brood rearing. The quail had an

excellent hatch and now a covey is using this 2 acre area to access a 40 acre crop field. This allowed a covey to establish in that field area and expand the area they are utilizing on the two adjoining farms.

Another landowner in Cass County used a Quail Habitat Initiative project to install native grass field borders around existing hay fields and smaller crop fields which previously had fescue borders. Over 7 acres of field borders were installed throughout the property and thus establishing the valuable early succession and edge habitat. The landowner commented "I can't thank QU/MDC enough for helping me improve the quail habitat on my farm. We are now seeing 3 coveys of quail on my farm instead of just a few single birds like in the past years. When can we do more habitat work next year?"

Did You Know???? Missouri studies have shown that 33% of quail chicks survive til fall and 80% of quail are lost by the next nesting season

More Success Stories

Don Willis reports that he had just as good/maybe better hunting on his own land than in Kansas last season! "We found three large coveys on 100 acres of land. One was a new covey. The other two had grown in numbers. I thought I had a fourth covey, but either they combined with one of the three or we just couldn't find them!" Don lights disks and burns to keep his CRP in shape. He reports 5 coveys present this fall.

Jef Hodges reported 2 additional coveys using a 20 acre native grass field last winter after dropping trees in the fencelines and draws in the field.

Bill White reports that 2 additional broods were using a 6 acre field where he sprayed brome/fescue in a 30 foot swath around the perimeter. The resulting bare ground and weeds were being used by a total of 3 broods....an estimated 70 birds on 6 acres.

New Quail Booklet and Video Now Available

On The Edge, the most comprehensive quail publication that MDC has ever published, is now available from any Department office.

A new video made possible by a USDA Environmental Quality Incentives Program Education grant and Quail Unlimited is now available upon request. The video was filmed during a How-To Quail Management Field Day conducted in Andrew County last spring. You may obtain your copy by contacting The Covey Headquarters Newsletter, 3915 Oakland Ave, St. Joseph, MO 64506, or emailing video@mo.usda.gov.

The MDC website now contains a quail page.....a work in progress..... Go to www.mdc.state.mo.us and click on Private Land Assistance, then click on the quail button. Also, check out the conservation contractors list under Private Land Assistance.

www.coveyheadquarters.com is back online

.....check it out

What is the Fall Shuffle???

The fall shuffle is the annual breakup of broods into coveys and the movement of birds to fall/winter habitats from the brood rearing areas. The shuffle occurs in mid-September thru early October in Missouri. During this time, adults will join young-of-the year from at least one brood to form coveys that average 11-12 birds. Fall crop harvest will also cause some coveys to shift to new areas.

Did You Know????? Studies have shown that the more litter buildup you have in your grass fields the more attractive your fields are to the Black Rat Snake, a common bird nest predator in Missouri. A Kansas study found these snakes in grasslands nearest forest and woodland. (From MOFWIS) By burning to control the amount of litter buildup and maintaining open ground, you should be able to deter this nest predator.

The *Northern Bobwhite Conservation Initiative(NBCI)*

by Elsa Gallagher, Upland Wildlife Coordinator, Missouri Department of Conservation

What is the NBCI?

The Northern Bobwhite Conservation Initiative is the first landscape-scale habitat restoration and population recovery plan for bobwhites in the U.S.

Who developed this plan?

The Southeast Quail Study Group (SEQSG), a group formed by the Directors of the Southeastern Association of Fish and Wildlife Agencies, was charged with developing a habitat-based recovery plan that would increase coordination and encourage collaboration in bringing back bobwhite quail.

What are the goals of the NBCI?

To restore northern bobwhite populations range-wide to an average density equivalent to that which existed on improvable acres in 1980. This will necessitate impacting habitat on about 7 per cent of 81.1 million acres of farm, forest, and rangeland so as to increase the current quail population by 2.7 million coveys.

And in Missouri?

To reach the goals of the NBCI, Missouri is responsible for producing over 206,000 new coveys. The good news about the goals of the NBCI is that if the only thing we do is to convert CRP from rank stands of monotypical exotics to native grass mixes, we will accomplish about 21% of the stated goals in new coveys. In Missouri, the potential to improve CRP is enormous. There is also a lot of potential in the Ozarks to provide good quality habitat using the natural community development. Quail were typically found in good numbers at the grassland/woodland interface – savanna habitat.

What can I do?

Get involved, be informed, become a spokesperson for quail recovery. Contact your local MDC biologist or your QU chapter and learn about quality quail habitat. Provide

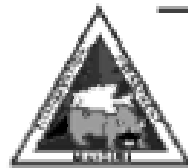
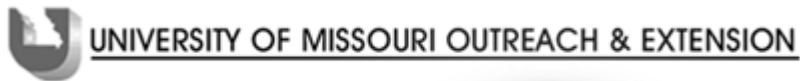
this habitat on ground you own or hunt on. The best thing that you can do to help quail numbers in the state is to become an informed advocate for improving habitat. Think Habitat!

How can I learn more about the NBCI?

Go to www.qu.org and click on S.E. Quail Study Group. There is a lot of information there and a few good publications including “*Bobwhite Basics*.”

The next issue of the Covey Headquarters Newsletter will cover what is being done by Quail Unlimited and government agencies in Missouri to fulfill OUR part in the NBCI.

Attention CRP Landowners — Check with your local USDA-FSA office about cost-share for burning, light disking, herbicide spraying and legume interseeding authorized by the 2002 Farm Bill on existing CRP contracts with grass plantings.



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